

-36-

Claims:

Sub
a2

1. A recombinant promoter, comprising a nucleic acid sequence selected from the group consisting of:
- 5 25;
- (a) the nucleic acid sequences shown in SEQ ID NOS: 17, 22, 23, 24, and
- (b) a nucleic acid sequence that shares at least 50% sequence identity with any of the nucleic acid sequences of (a); and
- (c) a nucleic acid sequence that comprises at least 20 consecutive nucleic acid residues of any of the nucleic acid sequences of (a), wherein the promoter is
- 10 capable of driving the expression of a transgene operably linked to the promoter.
2. The recombinant promoter of claim 1, comprising the nucleic acid sequence shown in SEQ ID NO: 17.
- 15 3. The recombinant promoter of claim 1, comprising the nucleic acid sequence shown in SEQ ID NO: 22.
4. The recombinant promoter of claim 1, comprising the nucleic acid sequence shown in SEQ ID NO: 23.
- 20 5. The recombinant promoter of claim 1, comprising the nucleic acid sequence shown in SEQ ID NO: 24.
6. The recombinant promoter of claim 1, comprising the nucleic acid
- 25 sequence shown in SEQ ID NO: 25.
- Sub
a3
7. A vector, comprising a recombinant promoter as recited in claim 1.
8. A host cell, comprising a vector as recited in claim 7.
- 30 9. A transgenic plant, comprising a host cell as recited in claim 8.

00641540.1081800

-37-

10. A transgene, comprising a promoter as recited in claim 1 and at least one ORF operably linked to the promoter.

11. A vector, comprising a transgene as recited in claim 10.

12. A plant cell, comprising a transgene as recited in claim 10.

13. The transgene of claim 10, wherein the ORF encodes a cationic peptide.

10 Sub 4
14. The plant cell of claim 12, wherein the plant cell is obtained from a plant selected from the group consisting of maize, wheat, rice, millet, tobacco, sorghum, rye, barley, brassica, sunflower, seaweeds, lemna, oat, soybean, cotton, legumes, rape/canola, alfalfa, flax, sunflower, safflower, brassica, cotton, flax, peanut, and clover; lettuce, tomato, cucurbits, cassava, potato, carrot, radish, pea, lentil, cabbage, cauliflower, broccoli, Brussel sprouts, peppers and other vegetables; citrus, apples, pears, peaches, apricots, walnuts, and other fruit trees; orchids, carnations, roses, and other flowers; cacao; poplar, elms, and other deciduous trees; pine, Douglas-fir, spruce, and other conifers; turf grasses; cacao; and rubber trees and other members of the genus Hevea.

15. A method for expressing at least one protein in a host cell, comprising:
providing a transgene, comprising an ORF and a recombinant promoter as recited in claim 1;
introducing the transgene into a host cell; and
allowing the host cell to produce a protein from the ORF.

16. The method according of claim 15, wherein the host cell is a plant host cell.

17. A protein, expressed according to the method of claim 15.

09641540 081800

-38-

18. The protein of claim 17, wherein the protein is a cationic peptide.

19. The recombinant promoter of claim 1, wherein the promoter is developmental-specific.

5

20. The promoter of claim 1, wherein the promoter is induced with ethylene or a metal.

21. The recombinant promoter of claim 19, wherein the promoter is expressable in gametophytic tissue.

22. A recombinant promoter, comprising at least eight promoter elements selected from the group consisting of E-box motifs (SEQ ID NO: 1), ERE elements (SEQ ID NO: 20), AT-rich regions (SEQ ID NO: 3), MRE elements (SEQ ID NO: 21), ACGT core elements (SEQ ID NO: 4), and duplicates thereof, wherein the promoter displays promoter activity.

23. The recombinant promoter of claim 22, wherein the promoter comprises at least ten promoter elements.

20

24. The recombinant promoter of claim 22, comprising the following promoter elements: 3'-ERE element (SEQ ID NO: 20), AT-rich region (SEQ ID NO: 3), ERE element (SEQ ID NO: 20), ERE element (SEQ ID NO: 20), E-box motif (SEQ ID NO: 1), MRE element (SEQ ID NO: 21), ACGT core element (SEQ ID NO: 4), ACGT core element (SEQ ID NO: 4), and ACGT core element (SEQ ID NO: 4)-5'.

25. A vector, comprising the promoter of claim 22 operably linked to an ORF.

30

26. A host cell, comprising a vector as recited in claim 25.

27. A transgenic plant, comprising a vector as recited in claim 25.

09641540 "081300

-39-

28. The transgenic plant of claim 27, selected from the group consisting of maize, wheat, rice, millet, tobacco, sorghum, rye, barley, brassica, sunflower, seaweeds, lemna, oat, soybean, cotton, legumes, rape/canola, alfalfa, flax, sunflower, safflower, brassica, cotton, flax, peanut, and clover; lettuce, tomato, cucurbits, cassava, potato, carrot, radish, pea, lentil, cabbage, cauliflower, broccoli, Brussel sprouts, peppers and other vegetables; citrus, apples, pears, peaches, apricots, walnuts, and other fruit trees; orchids, carnations, roses, and other flowers; cacao; poplar, elms, and other deciduous trees; pine, Douglas-fir, spruce, and other conifers; turf grasses; cacao; and rubber trees and other members of the genus Hevea.

29. The vector of claim 25, wherein the ORF encodes a cationic peptide.

15

add
a6

008130" 04574960